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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER

SENAD, E

ART UNIT

PAPER NUMBER

2894

DATE MAILED: 09/14/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/194,562

Applicant(s)

Leijon et al.

Examiner

Enad, Elvin

Group Art Unit

2834

☒ Responsive to communication(s) filed on Jun 2, 2000

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-8 and 10-19 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-8 and 10-19 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☒ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 9

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

2. Claims 10-17 are objected to because of the following informalities: Claim 10 depends upon canceled claim 9. For examination purposes, claim 10 is presumed dependent of claim 8. Claims 11-17 are dependents of claim 10. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In the last two lines of claim 2, the meaning of the limitation pertaining to the cable passing to the nearest adjacent slot "to form coils that lie to a side of the cable..." is vague and confusing.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 1,3 and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shildneck (USP 3014,139) in view of Siemens (German Patent 468,827).

Shildneck discloses the claimed invention except for having a stator with radial slots, the slots increasing in diameter. Shildneck discloses an improved continuous winding for an electromagnetic device such as a large turbine-driven generator, the winding employing an improved form of flexible insulated conductor for the laminated armature core of the dynamo-electric machine. As seen in figure 3 and as explained in detail in column 5, lines 11-26, the winding **18** enters and passes through inner passage (slot) **15** and passes around approximately one-half of the stator circumference and enter the outer conductor passage (slot) on the opposite side of the stator core.

Siemens teaches that it is known to have a stator having cylindrical opening winding slots with increasing radius in order to accommodate winding conductors having varying diameters. The diameter of the winding conductors vary due to the thickness of insulation.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the stator slot arrangement as taught by Siemens and to have modified the stator of Shildneck since such a modification according to column 1, lines 25-29 of Siemens would accommodate conductors having varying diameters and insulation thickness.

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7. Claims 2,4,5 and 7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shildneck (USP 3014,139) in view of Siemens (German Patent 468,827) and further in view of Enomoto et al. (USP 5,886,444).

Shildneck in view of Siemens disclose the claimed invention except for a teaching of winding the cable to a nearest adjacent slot when the positions of the slot in the current layer have been filled.

Enomoto et al. teach a method of manufacturing a stator coil whereby when the positions of the slot in the current layer have been filled, the cable winding then passes to the nearest adjacent slot. Note figures 7d and 7e for example.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the winding methodology as taught by Enomoto et al. and to have modified the stator slot arrangement as disclosed by Shildneck since such a modification according to Enomoto et al. in column 2, lines 1-45 would lower the resistance of the coil by shortening the end coil portion, reduce copper loss and improve efficiency of the rotary machine.

8. Claims 8 and 10-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shildneck (USP 3014,139) in view of Siemens (German Patent 468,827) and Elton et al. (USP 4,853,565).

Shildneck in view of Siemens disclose the claimed invention except for having a cable winding comprised of at least one semiconducting layer around the conductor. Shildneck

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discloses a direct cooled cable winding for an electromagnetic device such as a large turbine-driven generator.

Elton et al. teach that it is known to have an electrical cable comprising an internal grading layer of semi-conducting pyrolyzed glass fiber layer in electrical contact with the cable conductor. In another form of embodiment, Elton et al. teach an electrical cable provided with an exterior layer of internal grading layer of semi-conducting pyrolyzed glass fiber layer in contact with an exterior cable insulator with a predetermined reference potential.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the cable winding as taught by Elton et al. to the dynamo electric machine of Shildneck in view of Siemens since such a modification according to Elton et al. would prohibit the development of corona discharge.

9. With regard to claim 8, note figure 6 and column 6, lines 54-60 whereby Elton et al. teach the use of a filler material **78** disposed between the winding end portions in order to round off the winding end portions and reduce stress.

10. Claim 19 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Shildneck (USP 3014,139) in view of Siemens (German Patent 468,827) and Elton et al. (USP 4,853,565) and further in view of Breitenbach et al. (USP 4,785,138).

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Shildneck in view of Siemens and Elton et al. disclose the claimed invention except for having an outer metal screening and a sheath in the winding cable.

Breitenbach et al. teach that is known to use an outer metal screening and sheath in an electrical cable.

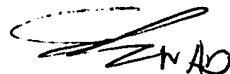
It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the metal screening and sheath as taught by Breitenbach et al. to the device as disclosed by Shildneck in view of Siemens and Elton et al. since such a modification according to Breitenbach et al. in column 2, lines 32-44 would provide shielding as well as providing increase in cable flexibility.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elvin Enad whose telephone number is (703) 308-7619.

13. Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 308-0956. The fax phone number for this Group is (703) 305-3431 (32).



Elvin Enad
Primary Examiner
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09.07.2000